

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

September 1, 2006

TO: Internal File

THRU: Wayne Hedberg, Permit Supervisor *WH*
Joe C. Helfrich, Environmental Scientist III and Team Lead

FROM: James D. Smith, Environmental Specialist *JS*

RE: Lease Addition U- 46484 & U-61049, Task ID #2597, Co-Op Mining Company,
Bear Canyon Mine, C/015/0025

SUMMARY:

The proposed amendment adds federal coal leases U-46484, U-61048, and U-61049; the remainder of U-024316; and fee coal lands to the permit area. Plates 1-2 and 1-3 show the relationship of coal ownership to surface ownership. The federal leases are totally or partially within the boundaries of the Manti-Lasal National Forest. The fee coal, owned by C.O.P. Coal Development, is partially within the forest boundaries, the remainder under surface lands owned by C.O.P.

	Acres added to permit
U-024316	60
U-46484	1,400
U-61048	1,108.27
U-61049	2,196.09
Fee	<u>2,740.00</u>
Total acres added	7,504.36
Previously permitted	<u>3,375.62</u>
Total acres permitted	10,879.98

After the Permittee submitted the amendment, they received a letter from the Division outlining the proposed structure for electronic submittal. The Permittee has committed to rearranging the electronic portion of the submittal to match Division guidelines and to resubmit the CDs in the format recommended by the Division.

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Permittee's Action		DOGM's Action	
Original submittal	07/21/2005	Assigned Task # 2292	
		Determination of Administrative Completeness.	10/17/2005
		Tech Memo – Geology and Hydrology	01/26/2006
		Letter with deficiency list.	02/01/2006
Response to Task # 2292	05/21/2006	Assigned Task # 2526	
		Tech Memo – Geology and Hydrology	07/07/2006
		Letter with deficiency list.	07/13/2006
Response to Task # 2526	08/09/2006	Assigned Task # 2597	
		Tech Memo – Geology and Hydrology	08/31/2006

TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

GEOLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR 784.22; R645-301-623, -301-724.

Analysis:

Revised Plates 5-1A, 5-1B, and 5-1C show projected mining in the Blind Canyon, Hiawatha, and Tank Seams, respectively. These maps also show projected subsidence for each individual seam. Plate 5-3 shows the projected combined subsidence from mining all three seams.

Plate 5-1B has been updated to include the entire permit area. This map of the projected Hiawatha Seam workings includes projections for areas in the north portion of the permit area that will be accessed through rock slopes from the Blind Canyon Seam and possibly by way of a new portal in Mohrland Canyon.

The tonnage estimates for lease U-46484 has been added to Table 5-1. For lease U-020668, the in-place tonnage Subtotal in Table 5-1 is greater than the sum of the tonnages for the three seams. "Total Tons" for the Blind Canyon and Hiawatha Seams, both In-Place and Recoverable, are too small, and "TOTAL" In-Place and Recoverable tonnages are also too small. This has been discussed with Mark Reynolds, and he already has a corrected version of this table ready to insert in the next submittal.

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Findings:

Information on geologic resources is not adequate to meet the requirements of this section. Prior to approval the Permittee must provide the following information, in accordance with:

R645-300-133.100, 301-121.200, 522, The Permittee must:

- Correct or update the "Total Tons" and "TOTAL" tonnages in Table 5-1;
- Correct or update the tonnage Subtotal for lease U-46484.

(This has already been discussed with Mark Reynolds, and he has a corrected version of Table 5-1 ready to insert in the next submittal.)

HYDROLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 701.5, 784.14; R645-100-200, -301-724.

Analysis:

Probable Hydrologic Consequences Determination

Text in Section R645-301-728 of the MRP has been modified or added. This section broadly describes the PHC and refers to Appendix 7-J. It also contains a very non-specific commitment to prepare a mitigation plan if surface water is impacted: a more specific mitigation plan is needed before the Division can approve this amendment. (This deficiency is being covered in Steve Christensen 's Tech Memo so it is not included with the Findings for this section.)

A probable hydrologic consequences determination is provided in Appendix 7-J, *Investigation of Groundwater and Surface-Water Systems in the C.W. Mining Company Federal Coal Leases and Fee Lands, Southern Gentry Mountain, Emery and Carbon Counties, Utah... Probable Hydrologic Consequences of Coal Mining in the Bear Canyon Mine Permit Area and Recommendations for Surface Water and Groundwater Monitoring*, which was prepared in 2001 by Mayo and Associates. No new material has been added to Appendix 7-J for this amendment. The 2001 investigation was done in preparation for the addition of the Wild Horse Ridge Extension to the Bear Canyon Mine permit, but it also covered additional federal leases and fee lands to the north and east, in and adjacent to the Mohrland area, although there is no indication in Mayo's report as to how far the adjacent area extended. The maps in Appendix 7-J show that the area investigated explicitly included federal leases U-46484, U-61048, U-61049; and U-024316 and, except for approximately 1,320 acres of fee land in Secs. 7, 8, 16, and 21, T. 16 S., R. 8 E., all the fee coal lands that are to be added to the permit by this current submittal. As to the 1,320 acres of fee coal, the current submittal shows there is no mining planned in or near these areas. The coal isopach maps indicate that no economically exploitable Hiawatha – Blind Canyon coal remains under these lands (the Hiawatha Mine already mined the one area with minable reserves). There is a small area where the Tank Seam is thick enough to mine, but it has little or no economic potential because of its limited size and the high probability

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of burned coal due to proximity to the outcrop. As determined from the maps and other information provided by the Permittee and field visits by the Division and others, the geology and hydrology of these 1,320 acres is similar to the area studied directly. Because of these factors, the failure of Appendix 7-J to explicitly include these 1,320 acres in the PHC determination is inconsequential.

Findings:

Information on hydrologic resources is adequate to meet the requirements of this section (See Steve Christensen's Tech Memo for Task No. 2597 for related Findings of deficiency on mitigation of impacts to surface water.)

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

Analysis:

Mine Workings Maps

Revised Plates 5-1A, 5-1B, and 5-1C show projected mining in the Blind Canyon, Hiawatha, and Tank Seams, respectively. These maps also show projected subsidence for each individual seam. Plate 5-3 shows the projected combined subsidence from mining all three seams.

Findings:

Information provided in the application meets the requirements of this section of the regulations.

RECOMMENDATIONS:

This amendment should not be approved until the Permittee has adequately addressed the deficiencies described in this Tech Memo.